State of South Carolina

Before the Public Service Commission of South Carolina

Docket No. 2002-223-E

In Re: Application of South Carolina Electric & Gas Company for Adjustments in the Company's Electric Rate Schedules and Tariffs	**NOTICE OF CHANGE AND APPLICATION FOR INCREASE IN RATES AND CHARGES**

Direct Testimony and Exhibits of

Nicholas Phillips, Jr.

On behalf of

South Carolina Energy Users Committee

November 8, 2002
Project 7902

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

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Direct Testimony of Nicholas Phillips, Jr.

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Nicholas Phillips, Jr.; 1215 Fern Ridge Parkway, Suite 208; St. Louis, MO 63141-2000.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am a consultant in the field of public utility regulation and a principal with the firm of Brubaker & Associates, Inc., energy, economic and regulatory consultants. Our firm and its predecessor firms have been in this field since 1937 and have participated in more than 1,000 proceedings in forty states and in various provinces in Canada. We have experience with more than 350 utilities, including many electric utilities, gas pipelines and local distribution companies (LDCs). I have testified in many electric and gas rate proceedings on virtually all aspects of ratemaking. More details are provided in Appendix A of this testimony.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of the South Carolina Energy Users Committee (SCEUC). SCEUC members purchase substantial amounts of electricity from South Carolina Electric & Gas Company (SCE&G). SCEUC members employ significant numbers of people in their major facilities located in South Carolina and are extremely concerned with the power cost increases that may result from this proceeding.

Q HAVE YOU PRESENTED TESTIMONY IN PRIOR PROCEEDINGS BEFORE THE SOUTH CAROLINA PUBLIC SERVICE COMMISSION (COMMISSION OR SCPSC)?

A Yes. I have been involved in many prior proceedings before this Commission concerning SCE&G, as well as other utilities.

Q WHAT IS THE SUBJECT MATTER OF YOUR TESTIMONY?

A I am presenting testimony concerning the appropriate cost allocation methodology for use in this proceeding, the revenue distribution to classes of any amount of rate increase granted by the Commission, and the proper design of SCE&G's electric rates. There are certain general principles that should form the basis for cost allocation, revenue distribution, and rate design. I have examined the testimony and exhibits presented by SCE&G in this proceeding with respect to cost allocation and rate design, will comment upon the propriety of these proposals, and make certain recommendations. I also comment on SCE&G's request to increase rates for the Jasper plant prior to the facility being used and useful in providing electric service to ratepayers. My colleague, Mr. Michael Gorman, will address the appropriate rate of return for use in this proceeding.

Q DOES YOUR TESTIMONY ADDRESS SCE&G'S NEED FOR AN INCREASE IN ELECTRIC RATES?

A My testimony addresses the ratemaking concern of allowing SCE&G to earn a return on or receive cost recovery for significant items not used and useful in providing electric service. Mr. Gorman addresses the appropriate cost of capital in the current financial environment.

In order to make my presentation consistent with the revenue levels requested by SCE&G, I have, in many instances, used their numbers for rate base, operating income, and rate of return. Use of these numbers should not be interpreted as an endorsement of them for purposes of determining the total dollar amount of rate increase to which SCE&G may be entitled. I recommend the appropriate distribution to classes of any amount of rate increase allowed by the Commission.

Summary of Conclusions and Recommendations

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS IN THIS PROCEEDING.

A A summary of my position and recommendations is listed below:

1. SCE&G's electric rates should be based on the cost of providing service to each customer class.

2. Having analyzed SCE&G's summer peak, winter peak, and load pattern, I conclude that the summer peak responsibility cost of service study is appropriate for use in this proceeding. It properly allocates cost responsibility to customer classes and, if implemented properly, minimizes the need for new generating capacity consistent with SCE&G's load management goals.

3. SCE&G's present rates are not adequately cost based and SCE&G's industrial customers are being overcharged by $7.8 million annually.

4. Whatever amount of rate increase is granted to SCE&G should be distributed to classes in a manner that will eliminate or substantially reduce the overcharges to industrial customers. SCE&G's proposed rate increase to classes would decrease the current overcharge to industrial customers to $2.1 million. Schedule 4 of Exhibit NP-2 ( ) shows the distribution required to eliminate subsidies for all classes and establish cost-based rates. Any increase granted should be distributed to

classes in proportion to the increase proposed by SCE&G or in proportion to Schedule 4 of Exhibit NP-2 ( ).

5. SCEUC has special concerns regarding the ratemaking implications associated with allowing SCE&G to earn a return on or receive cost recovery for items not used and useful in the provision of electric service to customers.

6. More than 40% ($42.8 million) of the entire required increase is associated with SCE&G's request to earn a rate of return on the Jasper generating facility while under construction. This facility is a combined cycle unit with relatively low capital cost and relatively short construction schedule. SCE&G will sell 250 MW of capacity from 2004 to 2012. Ratepayers should not be required to pay higher rates now to provide SCE&G with a 12.5% return on common equity to shareholders for this facility that is not used and useful in providing electric service.

7. SCE&G's request to put its share of GridSouth costs in rate base is premature, more appropriately a wholesale ratemaking issue, and another example of the Company requesting a rate increase for an item not used and useful in providing electric service. To my knowledge, the majority owners of GridSouth, Duke, and CP&L have not requested cost recovery of GridSouth expenses.

8. SCE&G has not presented quantitative evidence such as a cost benefit analysis that conclusively demonstrates that costs associated with maintaining the franchise areas of Charleston and Columbia, South Carolina are used and useful in the provision of electric service. To the extent that shareholders benefit from the securing of these franchise areas, shareholders should share in the associated costs. Certainly, SCE&G is a more valuable entity with the continuation of these franchises.

Cost of Service and Rate Design Principles

Q PLEASE EXPLAIN THE BASIS FOR YOUR EVALUATION AND DESIGN OF RATES.

A The ratemaking process has three steps. First, we must determine the utility's total revenue requirement and whether an increase in revenues is necessary. Second, we must determine how any increase in revenues is to be distributed among the various customer classes. A determination of how many dollars of revenue should be produced by each class is essential for obtaining the appropriate level of rates. Finally, individual tariffs must be designed to produce the required amount of revenues for each class of service and to reflect the cost of serving customers within the class.

The guiding principle at each step should be cost of service. In the first step – determining revenue requirements – it is universally agreed that the utility is entitled to an increase only to the extent that its actual cost of service has increased. If current rate levels exceed revenue requirement, a rate reduction is required. In short, rate revenues should equal actual cost of service. The same principle should apply in the second two steps. Each customer class should, to the extent practicable, produce revenues equal to the cost of serving that particular class, no more and no less. This may require a rate increase for some classes and a rate decrease for other classes. The standard tool for determining this is a class cost of service study that shows the rates of return on each class of service. Rate levels should be modified so that each class of service provides approximately the same rate of return. Finally, in designing individual tariffs, the goal should also be to relate the rate design to the cost of service so that each customer's rate tracks, to the extent practicable, the utility's cost of providing that service.

Q WHY IS IT IMPORTANT TO ADHERE TO BASIC COST OF SERVICE PRINCIPLES IN THE RATE DESIGN PROCESS?

A The basic reasons for using cost of service as the primary factor in the rate design process are equity, engineering efficiency (cost minimization), conservation, and stability.

Q HOW IS THE EQUITY PRINCIPLE ACHIEVED BY BASING RATES ON COSTS?

A When rates are based on cost, each customer (to the extent practical) pays what it costs the utility to provide service to the customer, no more and no less. If rates are not based on cost of service, then some customers contribute disproportionately to the utility's revenues by subsidizing service provided to other customers. This is inherently inequitable.

Q HOW DO COST-BASED RATES ACHIEVE THE ENGINEERING EFFICIENCY (COST MINIMIZATION) OBJECTIVE?

A Cost minimization is achieved when customers receive the appropriate price signals through the rates that they face. Rate design is the step that follows the allocation of costs to classes, so it is important that the proper amounts and types of costs be allocated to the customer classes so that they may ultimately be reflected in the rates.

When the rates are designed so that the energy costs, demand costs, and customer costs are properly reflected in the energy, demand, and customer components of the rate schedules, respectively, customers are provided with the proper incentives to minimize their costs, which will in turn minimize the costs to the utility.

From a rate design perspective, overpricing the energy portion of the rate and underpricing the fixed components of the rate (such as customer and demand charges) will result in a disproportionate share of revenues being collected from high load factor customers.

Q PLEASE GIVE AN EXAMPLE.

A I will do so by focusing upon the two components of the rates applicable to large customers that are predominant in terms of cost causation and revenue collection. These are the demand component and the energy component.

Assume that a given dollar amount of revenue is to be collected from application of these two elements. From a rate design perspective, various combinations of revenue collections from the demand and energy charge are, of course, possible. These possibilities range from the collection of all such costs through an energy charge, with no collection through the demand charge, to the collection of all such costs through a demand charge, with no collection through the energy charge. Obviously, neither of

these extreme possibilities reflects reasonable rate design since there are definite demand and energy components to the cost of serving customers.

In between these two extremes, there is a range of possibilities. The most obvious possibility is to base the demand charges on the demand costs and the energy charges on the energy costs. To the extent that there is an overall correspondence between costs and revenues to be collected, basing the demand charge on the demand cost and the energy charge on the energy cost will most closely charge each customer with the appropriate revenue responsibility.

To illustrate the cost minimization concept, assume that a cost-based rate would contain a $15.00 per kilowatt (kW) demand charge and a 2¢ per kilowatthour (kWh) energy charge. Suppose, however, that the rate was instead designed with a $3.00 per kW demand charge and a 5¢ per kWh energy charge. (It is implicit that application of both of these rates to the total class test year billing determinants would produce the same total revenue.)

Consider the effect of the alternate rate as compared to the cost-based rate. When a customer faces a demand charge of $3.00 per kW, the price signal he gets is that imposition of peak demands on the utility's system is not very costly. Thus, there is less incentive to control peak loads with a below-cost demand charge than if the customer faces a demand charge that more nearly approximates demand costs. To the extent that the customer reacts to this below-cost demand charge, the tendency will be for system peak loads to be higher than otherwise, which will impose additional costs on the utility – costs that may have to be collected from all customers.

Consider now the effect of charging an energy rate of 5¢ per kWh, as compared to an energy cost of 2¢ per kWh. The customer is influenced to use less energy than would be the case if the rates were cost-based. This will tend to increase customer preferences for alternate energy supplies, and particularly so for high load factor

customers who use a large amount of energy in relation to their peak load. This problem becomes particularly exacerbated if significant overcharges occur during the low load (off-peak) periods on the utility's system, when additional energy consumption at lower rates would be beneficial to the system.

Q HOW DO COST-BASED RATES FURTHER THE GOAL OF CONSERVATION?

A Conservation occurs when wasteful or inefficient uses are discouraged or minimized. Only when rates are based on actual costs do customers receive a balanced price signal against which to make their consumption decisions. If rates are not based on costs, then customers may be induced to use electricity inefficiently in response to the distorted signals. It is important that the costs associated with certain conservation and demand management programs should not create a new form of subsidization and move rates away from cost.

Q PLEASE DISCUSS THE STABILITY CONSIDERATION.

A When rates are closely tied to costs, the earnings impact on the utility of changes in customer use patterns will be minimized as a result of rates being designed in the first instance to track changes in the level of costs. Thus, cost-based rates provide an important enhancement to a utility's earnings stability, reducing its need for filings for rate increases.

From the perspective of the customer, cost-based rates provide a more reliable means of determining future levels of power costs. If rates are based on factors other than costs, it becomes much more difficult for customers to translate expected utility-wide cost changes (i.e., expected increases in overall revenue requirements) into changes in the rates charged to particular customer classes (and to customers within the

class). This situation reduces the attractiveness of expansion, as well as of continued operations, because of the lessened ability to plan.

Q WHEN YOU SAY "COST," TO WHAT TYPE OF COST ARE YOU REFERRING?

A I am referring to the utility's "embedded" or actual accounting costs of rendering services; that is, those costs that are used by the Commission in establishing SCE&G's overall revenue requirement.

Q PLEASE COMMENT ON THE BASIC PURPOSE OF A COST OF SERVICE STUDY.

A After determining the overall cost of service or revenue requirement, a cost of service study is used to allocate the cost of service among customer classes. A cost of service study shows how each customer class contributes to the total system cost. For example, when a class produces the same rate of return as the total system, it is returning to the utility revenues just sufficient to cover the costs incurred in serving it (including a reasonable authorized return on investment). If a class produces a below-average rate of return, it may be concluded that the revenues are insufficient to cover all relevant costs. On the other hand, if a class produces a rate of return above the average, it is paying revenues sufficient to cover the cost attributable to it and, in addition, is paying part of the cost attributable to other classes who produce a below-average rate of return. The class cost of service study is important because it shows the class revenue requirement, as well as the rate of return, under current and any proposed rates.

Q PLEASE COMMENT ON THE PROPER FUNDAMENTALS OF A COST OF SERVICE STUDY.

A Cost of service is a basic and fundamental ingredient to revenue requirement and rate design. In all cost of service studies, certain fundamental concepts should be recognized. Of primary importance among these concepts is the functionalization of costs, as well as the classification of the nature of these costs as to whether they vary with the quantity of energy consumed, the demand placed upon the system, or the number of customers being served. Functionalization is the classification and arrangement of costs according to major functions, such as production, transmission, and distribution.

Fixed costs are those costs that tend to remain constant over the short run irrespective of changes in output and are generally considered demand related. Fixed costs include those costs that are a function of the size of the investment in utility facilities, and those costs necessary to keep the facilities "on-line." Variable costs on the other hand are basically those costs that tend to vary with output and are generally considered commodity related. Customer-related costs are those that are closely related to the number of customers served, rather than the quantity of energy consumed or the peak demands placed upon the system. An understanding of these concepts is essential to cost of service studies, as well as appropriate rate design.

Q IN CONNECTION WITH YOUR ANALYSIS, DID YOU HAVE AVAILABLE TO YOU ANY COST OF SERVICE STUDIES?

A Yes, I did. I had available to me summer coincident peak cost of service studies for the 12-month period ended March 31, 2002 that were produced and furnished by SCE&G. The most appropriate cost of service for use in this proceeding is the summer coincident peak responsibility method proposed by SCE&G consistent with past practice. This

method has been consistently utilized by SCE&G and approved by this Commission for many years. Use of the summer coincident peak study will provide the most accurate evaluation of the cost to serve various customer classes. The use of the summer coincident peak method is also the most consistent with actual load analysis of the SCE&G electric system. Cost allocation methods that directly utilize annual energy usage to allocate production investment, such as the peak and average method, are completely inappropriate for use in this proceeding and should not be utilized for cost of service or serve as the basis of rate design.

Cost of Service Analysis

Q MR. PHILLIPS, PLEASE DESCRIBE SCHEDULE 1 OF EXHIBIT NP-1 ( ).

A Schedule 1 shows the load factors for the SCE&G rate classes, based on their summer coincident peak demand for this test period. The load factor for the total industrial service class of 85.4% is substantially higher than the load factors for the other major classes of customers. The residential class load factor is 46.4% and the small general service class load factor is 46.1% for this test year ended March 31, 2002.

Q HOW DID YOU COMPUTE THE LOAD FACTORS SHOWN IN SCHEDULE 1?

A I divided the kWh generated for a customer class by the product of the coincident peak demand asserted on the system by that class and the number of hours in the test year (8,760).

Q PLEASE EXPLAIN THE SIGNIFICANCE OF THE LOAD FACTOR.

A Load factor is an indication of the degree of utilization of the demand imposed upon the utility system by a customer (or class of customers). It relates average use of the

system to the maximum use at any one time. Load factor is an important indicator of the cost of serving a customer class, since fixed costs, including capital expenditures, return, depreciation, and certain taxes and expenses, are determined by the magnitude of demands imposed upon the system, and do not vary with the number of kWh produced or consumed. Stated in another manner, the fixed costs would still exist if sales were to decline. As load factor increases, the fixed costs related to the maximum demands imposed upon the system are spread over a larger number of kWh, resulting in lower per unit power costs. Similarly, as load factor decreases, higher per unit costs result.

Q DOES THE VOLTAGE LEVEL OF SERVICE AFFECT COST OF SERVICE?

A Yes. Sales by voltage level of service for each rate class is shown on Exhibit NP-1 ( ), Schedule 2. Service at higher voltage levels generally results in lower cost of providing service. The residential and street lighting classes purchase all of their power at the distribution voltage level. Since no power is supplied to the residential and street lighting classes directly from the high voltage levels, it is necessary for the Company to make investments in both primary and secondary distribution lines, as well as transmission lines and facilities, to provide service to these customer classes.

For large general service customers, 75% of sales occur at the transmission voltage level or subtransmission voltage level. Therefore, in supplying energy to a large portion of these large general customers, it is unnecessary for the SCE&G to make any investments or related expenditures in secondary or primary voltage distribution facilities. Since SCE&G is generally not required to incur costs below the transmission and subtransmission voltage levels to serve many of these industrial customers, the cost per kWh of serving them is lower than the cost of serving those customers who require the lower voltage distribution system. In addition, energy losses are inversely related to

voltage level of service resulting in less fuel per kWh required to serve higher voltage level industrial customers.

Q MR. PHILLIPS, HAVE YOU ANALYZED DATA TO CONSIDER THE ECONOMIES OF SCALE ASSOCIATED WITH SCE&G'S CUSTOMER-RELATED COSTS?

A Yes. Exhibit NP-1 ( ), Schedule 3 shows the average kWh sales per customer for SCE&G's major classes of service for the 12 months ended March 31, 2002. As can be seen in Schedule 3, large general service customers as a class purchased substantially more power per customer service than any of the other classes. For example, the average industrial service customer used more than 1,700 times as many kWh as did the average residential customer.

These large differences in average kWh sales per customer for the various customer classes result in economies of scale in customer-related costs, such as meter reading, billing, and customer accounting expense, producing much lower customer-related costs per kWh sold to these large industrial customers.

Q HAVE YOU CONSIDERED THE RELATIONSHIP BETWEEN INVESTMENT IN PLANT AND KWH SALES FOR SCE&G'S CUSTOMER CLASSES?

A Yes. Exhibit NP-1 ( ), Schedule 4 shows SCE&G's asserted rate base as SCE&G allocated it to the customer classes in its coincident peak cost of service study, expressed on a per kWh basis. As shown in Schedule 4, much less investment is required on a per kWh basis to serve the large general service customers than to serve any other class of customers.

Q HAVE YOU ALSO CONSIDERED THE RELATIONSHIP BETWEEN OPERATING EXPENSES AND KWH SALES FOR SCE&G'S CUSTOMER CLASSES?

A Yes. Exhibit NP-1 ( ), Schedule 5 shows operating expenses (revenue deductions) as SCE&G allocated them to the customer classes in its coincident peak cost of service study, expressed on a per kWh basis. Schedule 5 shows that significantly lower operating expenses are incurred per kWh sold to large general service customers than are incurred per kWh sold to residential or commercial customers.

Q PLEASE SUMMARIZE THE DATA SHOWN IN SCHEDULES 1 THROUGH 5 OF EXHIBIT NP-1 ( ).

A These schedules demonstrate how, on a per kWh basis, the costs of serving the large industrial service customers are much lower than the costs of serving smaller customers. Cost-based utility rates should reflect these differences.

Q MR. PHILLIPS, ARE RATES THAT REFLECT THE LOWER COSTS PER KWH OF ENERGY SOLD TO INDUSTRIAL CUSTOMERS CONSISTENT WITH THE CONCEPT OF EQUITABLE RATES TO ALL ELECTRIC CUSTOMERS?

A Yes, absolutely. As demonstrated in Schedules 1 through 5 of Exhibit NP-1 ( ), SCE&G's costs to produce and deliver a kWh to a large general service customer are substantially less than its costs to produce and deliver a kWh to smaller users, such as a residential or a small general service customer. Equitable rates between customer classes are not determined by looking at the price paid per kWh. They are determined by seeing that the rates paid reflect the costs incurred by the utility. This determination is made by analyzing, in a cost of service study, whether each customer class is providing the utility with a rate of return substantially equal to the system average rate of return. If each class is providing essentially equal rates of return, the rates are equitable

as among customer classes. If the rates of return are not equal, then one class is subsidizing another class, which is inequitable.

Analysis of Electric Load Characteristics

Q PLEASE EXPLAIN SCHEDULES 6 AND 7 OF EXHIBIT NP-1 ( ).

A Schedules 6 and 7 of Exhibit NP-1 ( ) summarize certain pertinent load characteristics of SCE&G's electric system. These load characteristics are analyzed to determine the appropriate methodology to be used in allocating the total cost of service to the Company's various rate classes and rate schedules.

Q PLEASE CONTINUE WITH YOUR EXPLANATION.

A Schedule 6 of Exhibit NP-1 ( ) is an analysis of SCE&G's system load factor and load pattern over the period 1997 through 2001. The data for the years 1997 through 2001 represent actual operating information extracted from the Company's Form 1 Report to the Federal Energy Regulatory Commission (FERC) or other SCE&G data. Column 1 of Schedule 1 shows the Company's system load factor. The annual load factor has been in the range of 56% to 59% over the entire period of 1997 through 2001.

Column 2 of Schedule 6 shows the ratio of the average monthly system peak to the annual system peak. This ratio has never reached the 90% level during the entire period 1997 through 2001, which is characteristic of a system with a predominant annual system peak. The ratio has generally been in the range of 80% to approximately 85%.

Column 3 shows the ratio of SCE&G's summer peak to its winter peak in the same calendar year. This column shows that the Company had a summer peak for all years from 1997 through 2001.

Column 4 is the difference between the summer peak and the winter peak demands. As previously noted, the Company has been summer peaking for many years, from 1997 through 2001. In 1997, the summer peak exceeded the winter peak by 608 megawatts (MW). Similarly, the 1998 summer peak exceeded the winter peak by 678 MW, and in 1999, the summer peak exceeded the winter peak by 366 MW. In 2000, the summer peak was greater than the winter peak by 311 MW, and in 2001, the summer peak was greater than the winter peak by 116 MW.

Schedule 7 of Exhibit NP-1 ( ) shows the relationship between monthly peaks and the annual peak for the years 1997 through 2001. Each monthly peak is shown as a percent of the annual system peak. The annual system peak is designated as 100%. As shown on Schedule 7, three of the last five annual system peaks occurred in August, and two of the last five annual system peaks occurred in July, which is consistent with SCE&G's planning peak.

Q HAVE YOU HAD AN OPPORTUNITY TO REVIEW FORECAST PEAK LOAD DATA?

A Yes. It is important to recognize that SCE&G uses its annual summer planning peak to calculate its system reserve margin that is a main indictor of a utility's capacity requirement. As reserve margins decrease, additional capacity is required to serve the system load.

SCE&G has stated that it builds generating capacity to meet expected peak demands. SCE&G forecasts the continuation of predominant summer peaks over the duration of its load forecast and is building generating capacity based on those forecasted peaks. Therefore, it is appropriate to endorse the continued use of the summer coincident peak method of cost allocation for SCE&G.

A method of cost allocation which allocates some portion of fixed production cost on annual energy usage, such as the "peak and average" method (or other energy-

based methods), would not adequately account for the dominant summer coincident peak and therefore fail to reflect the actual load characteristics of the SCE&G system. Allocating production investment on average demand or kWh signals customers that a demand created at a peak hour is the same as a demand created during an off-peak hour and is in conflict with SCE&G's demand management goals. The average of the 12 coincident peak method is also not appropriate for cost allocation since SCE&G's monthly peaks are neither equal in importance nor indicative of cost causation. The 12 coincident peak method and the peak and average method (which also relies on the winter peak and on annual energy consumption) are at odds with SCE&G's present and proposed rates that charge customers substantially more for demands created during the summer months.

As previously stated, SCE&G data indicates that its capacity expansion planning is based on forecasted summer peak loads. SCE&G is basically adding generation capacity to meet its forecasted summer peak demands. Therefore, I recommend that the Commission adopt the summer coincident peak method of cost allocation, consistent with past practice.

Allocation of Production Investment

Q IN YOUR OPINION, IS IT APPROPRIATE TO CLASSIFY ALL PRODUCTION INVESTMENT AS DEMAND-RELATED?

A Yes. Consumers take for granted that when they flip the switch an electric light or appliance will turn on and run. Since electric energy cannot be stored in large quantities for any significant length of time, utilities must provide adequate generating capacity to meet the demands of their customers when those customers decide to make those

demands. Therefore, investment in generation plant is properly classified as a demand-related cost.

Q WHAT ABOUT THE ARGUMENT THAT SOME PORTION OF THE INVESTMENT IN BASE LOAD PLANT SHOULD BE CLASSIFIED AS BEING ENERGY-RELATED, ON THE THEORY THAT A UTILITY IS WILLING TO MAKE CERTAIN ADDITIONAL CAPITAL INVESTMENTS TO REDUCE ITS LEVEL OF FUEL COSTS?

A With respect to this argument, it should be noted that the economic choice between a base load plant and a peaking plant must consider both capital costs and operating costs, and therefore is a function of average total costs. The capital cost of peaking plants is lower than the capital cost of base load plants, but the operating costs of peaking plants are higher than the operating costs of base load plants. Moreover, when the hours of use are considered, the fixed cost per kWh for base load plant is usually less than the fixed cost per kWh for the peaking plant. Of course, since the fuel costs of base load plants are lower than the fuel costs of peaking plants, the overall cost per kWh for base load plants is also less than the overall cost per kWh for peaking plants.

It is necessary, therefore, to look at both capital costs and operating costs in light of the expected capacity factor of the plant. The fact that base load plants have lower fuel costs than peaking plants does not mean that the investment in base load plants is strictly to achieve lower fuel costs. Investment in a base load plant would be made to achieve lower total costs, of which fixed costs and fuel costs are the primary ingredients.

For any given system, the capital costs are not a function of the number of kWh generated, but are fixed and therefore are properly related to system demands, not to kWh sold. These costs are fixed in that the necessity of earning a return on the investment, recovering the capital cost (depreciation), and operating the property are related to the existence of the property and not to the number of kWh sold. If sales

volumes change, these costs are not affected, but continue to be incurred, making them fixed or demand-related in nature.

In my opinion, it is not proper to classify a portion of the fixed costs related to production based on energy. However, if an attempt were made to increase the allocation of investment to one group of customers, on the theory that those customers benefit more than others from the lower energy costs that result from the operation of a base load plant as opposed to a peaking plant, the analysis should be carried to its logical conclusion. The logical conclusion would be to fairly and symmetrically allocate energy costs to the group of customers who are forced to bear the higher capital costs allocated to them on a kWh basis. Energy costs allocated to the high load factor class should recognize lower operating costs which result from the higher capital costs of the base load plants. Unfortunately, in the past when the peak and average method was proposed, the lower fuel costs were not properly assigned to the industrial class of customers.

Q BASED ON THIS ANALYSIS, DO YOU BELIEVE THAT IT IS APPROPRIATE TO ALLOCATE PRODUCTION OR TRANSMISSION INVESTMENT COSTS ON A METHOD THAT IS SUBSTANTIALLY A KWH ALLOCATION, SUCH AS THE PEAK AND AVERAGE METHOD?

A No. In my opinion, these kWh types of allocation methods are totally inappropriate. They give far too much weighting to energy consumption, and understate the importance of peak loads that are dominant on the SCE&G electric system.

Q ARE THERE ANY OTHER REASONS WHY YOU DISAGREE WITH THE CLASSIFICATION OF FIXED COSTS PARTLY ON THE BASIS OF ENERGY?

A Yes. Since rate design should be based on cost of service, a number of problems are directly related to the allocation of fixed costs on an energy basis. First, allocation of fixed costs partly based on energy consumption makes the rates less stable than they would otherwise be, and second, allocation of fixed costs partly based on energy reduces the incentive given to customers by off-peak pricing provisions. Allocating production investment on an energy basis signals customers that a demand created at the peak hour is the same as a demand created during the off-peak hour. Customers that shift loads in response to time-of-day rates will not be treated fairly by a kWh type of costing methodology, such as the peak and average method.

Q PLEASE EXPLAIN.

A With respect to stability, if a significant proportion of fixed costs is classified on the basis of energy and the level of kWh sales decreases (as often happens during an economic downturn), the utility's revenues will drop more than its costs, since fixed costs are being collected in the energy or variable portion of the rate. On the other hand, a proper recognition of the differentiation between demand and energy costs would, under these circumstances, cause revenues to decline in closer correspondence to the decline in costs, since the energy charges would basically recover those costs which do, in fact, vary with the number of kWh sold.

With respect to the concept of off-peak pricing, classification of a portion of the demand-related costs based on energy reduces the savings to the customer which would result from increased use during off-peak hours. For example, if a customer were to increase his consumption during off-peak hours (without changing his demands or energy consumption during the on-peak hours), this classification method would allocate

more investment in fixed costs to him than before, since the number of kWh added during the off-peak period would increase the allocation of fixed costs, even though the system's total capacity and capacity-related costs had not increased. This reduces the savings that would be available to the customer as a result of adding load off-peak as opposed to on-peak. This inequity is exacerbated when viewed by a customer who shifts summer loads to the remaining eight months of the year. The customer would receive lower rates, temporarily, but would not receive an appropriate reduction in the allocation of demand-related costs compared to his use of the loads during the summer period. Therefore, this customer can expect an above-average increase in the next rate case as a reward for his shifting. In my opinion, this result is a further demonstration of the inappropriateness of an energy type (average demand) approach to the allocation of fixed costs. Allocating fixed costs on an energy basis is in direct conflict with the current and proposed rate structure and the time-of-day/seasonal load management type rates previously approved by this Commission.

Distribution of Revenue Increase Proposed by SCE&G

Q HAVE YOU REVIEWED THE MANNER IN WHICH SCE&G PROPOSES TO INCREASE THE RATES CHARGED TO ITS VARIOUS CUSTOMER CLASSES?

A Yes, I have. Schedule 1 of Exhibit NP-2 ( ) summarizes SCE&G's proposal on a net basis. SCE&G proposes to increase residential revenues by 7.06%, small general service revenues by 13.81%, medium general service by 11.94%, large general service revenues by 5.38%, and lighting class revenues by 12.82%. The distribution of the increase as proposed by the Company is based on its stated goal of cost-based pricing which would send clear price signals, promote the efficient use of electricity, complement demand-side management efforts, allow rates to remain competitive,

encourage higher load factors, foster energy conservation, and promote off-peak use. Schedule 2 of Exhibit NP-2 ( ) shows SCE&G's proposed base rate increase based on the present and proposed cost of service studies submitted in this case.

Results of Cost of Service Studies

Q HAVE YOU EXAMINED THE CLASS RATES OF RETURN FOR THE TEST YEAR?

A Yes. Schedule 3 of Exhibit NP-2 ( ) shows rates of return, indexes, and revenue subsidies for each class of service under present and SCE&G proposed rates utilizing the summer coincident peak method of cost allocation.

A negative revenue subsidy indicates the amount by which a class is paying rates below cost of service. A positive revenue subsidy indicates the amount that a class is paying in excess of cost of service and being overcharged with respect to cost. For example, the small general class is now paying rates that are $7.4 million below cost, while the large general service class is presently paying rates that are $7.8 million greater than cost.

Under the allocation of the increase proposed by SCE&G, the residential class would be $10.1 million below cost of service, and the large general service class would be $2.1 million above cost. Schedule 3 of Exhibit NP-2 ( ) demonstrates that all major class revenue subsidies are not uniformly decreased under SCE&G's proposed distribution of the requested increase.

SCE&G's proposed distribution of the increase clearly does make a meaningful movement toward cost-based rates for the large general service class. The overpayment by industrial customers would be decreased from $7.8 million annually to a level of $2.1 million annually under SCE&G's proposed rates.

Large general service customers cannot afford to pay $7.8 million in annual overcharges. This overpayment should be significantly reduced in this proceeding. The results are clear – industrial customers are currently being overcharged, and the dollar amount of the overcharge is significant. SCE&G's proposal does result in a decrease, but not an elimination of the overcharge contained in industrial rates.

Q HAS THE COMMISSION RECOGNIZED THE ECONOMIC VALUE OF COMPETITIVE COST-BASED RATES TO SOUTH CAROLINA?

A Yes. In the recent Piedmont Natural Gas Company, Inc. rate proceeding, the Commission recognized the economic value of competitive rates and allocated revenue between rate classes while citing the following principles.

1. The records show that industrial customers were subsidizing residential and commercial customers. Reduction or elimination to this subsidization was viewed favorably.
2. Appropriate industrial rate designs could help the state of South Carolina retain existing industry and perhaps attract new industry. The Commission found that was particularly important given the significant loss of manufacturing jobs in the state of South Carolina in recent years. The Commission also observed that the loss in manufacturing jobs had a profound affect on personal income, personal income tax revenues, and unemployment payments and other government-related costs.
3. The Commission also observed the appropriate rate design principles help respond to the price sensitive industrial market and better allow electric companies to compete with alternative fuels for these price sensitive customers. (South Carolina Public Service Commission Docket No. 2002-63-G-Order No. 2002-671, November 1, 2002 at page 66.)

Q DO YOU AGREE THAT THE COMMISSION SHOULD BE CONCERNED ABOUT THE DEVELOPMENT OF COMPETITIVE RATES TO HELP PRESERVE SOUTH CAROLINA INDUSTRIAL FACILITIES?

A Yes. Industrial facilities must manage their production costs in order to profitably sell their goods and services in wholesale markets. An increase to SCE&G's electric rates will increase industrial production costs. Increasing industrial production costs is a particularly sensitive issue in today's economic environment. As shown in Table 1 below, the producer price index (PPI) has been flat to decreasing since 2001.

TABLE 1

Producer Price Index
Finished Goods Less Food & Energy

Date	Index
September 2001	150.6
October 2001	150.0
November 2001	150.1
December 2001	150.4
January 2002	150.1
February 2002	150.3
March 2002	150.2
April 2002	150.3
May 2002	150.3
June 2002	150.6
July 2002	150.1
August 2002	149.9
September 2002	150.0

Source: U.S. Department of Labor, Bureau of Labor Statistics

A flat to declining PPI indicates that wholesale prices for industrial products have been flat to decreasing. Consequently, while industrial companies' costs of production are going up, the wholesale prices at which they are able to sell their goods and services have been flat to declining. As a result, the economic returns of the industrial companies

have been contracting, thereby lowering taxable income, thus making the decision to continue to operate an industrial facility somewhat problematic.

Q HOW DO INDUSTRIAL COMPANIES RESPOND TO THIS ECONOMIC PRESSURE?

A Industrial companies are forced to operate their facilities in the most economical manner possible. With demand and wholesale prices down and costs of production up, companies will shift production to their lowest-cost production facilities and/or lower cost by all prudent means. This will enhance competition between companies and within companies to retain production during slower economic times.

Q HOW WILL AN INCREASE IN SCE&G'S RATES IMPACT ITS INDUSTRIAL CUSTOMERS?

A An increase in SCE&G's rates will increase its industrial customers' cost of production. These customers will then be forced to find ways to offset this cost increase or face the possibility of losing production to other facilities within the same company, or not being able to economically sell their goods and services at prevailing wholesale prices. The reality of these decisions facing industrial customers is they must offset production cost increases in order to compete under prevailing wholesale prices. With the increasing energy prices, companies will look to lower employment costs, reconfigure operations to lower operating costs, and other means to reduce their costs in order to remain competitive. A rate increase will inhibit South Carolina industry's ability to compete within their own companies to maintain production, and to attract additional production into their facilities. A rate increase will also inhibit South Carolina's efforts to attract new industrial facilities.

Q IS THERE ANY EVIDENCE THAT SOUTH CAROLINA'S INDUSTRIAL FACILITIES HAVE REDUCED PRODUCTION IN THE STATE?

A Yes. A report issued by the South Carolina Controller's General Office on August 20, 2002 states that corporate income tax revenue in South Carolina dropped by 38.6% from $180.4 million in fiscal year 2001 to $110.8 million in fiscal year 2002. Also, there has been a dramatic decline in the number of manufacturing jobs in South Carolina over the period 1995 through the beginning of 2002. Over this time period, the United States Department of Labor, Bureau of Labor Statistics reports that manufacturing jobs decreased in South Carolina by over 65,000 jobs. This represents over a 17% decline in the 380,000 industrial jobs that existed in South Carolina in 1995.

Q HOW SHOULD THE COMMISSION USE THIS INFORMATION IN REACHING THE APPROPRIATE ALLOCATION OF REVENUES BETWEEN CLASSES IN THE DEVELOPMENT OF RATES?

A The Commission should be mindful that South Carolina industrial companies are battling to maintain their viability and existence in the State of South Carolina. Industrial companies are competing with other facilities in other states within their own companies, and with other companies that make substitute industrial products. Industrial companies' profit margins are being squeezed by a decline in the price for industrial products despite the fact that industrial companies are experiencing increased cost of production.

SCE&G's request to increase its rates will increase its industrial customer's cost of production. These same industrial customers will likely not be able to pass these production cost increases to their customers in the form of higher wholesale prices. Thus, the South Carolina facilities' profitability will be hurt. This reduced profitability may cause many companies to consider moving production to lower-cost facilities and/or terminate production at high cost facilities, including those in South Carolina. The state

of the current economy is presenting particular difficult challenges for many industrial companies, including those in South Carolina.

Q HAVE YOU CALCULATED THE INCREASES REQUIRED FOR ALL CLASSES TO PAY RATES COMMENSURATE WITH COST?

A Yes. Schedule 4 of Exhibit NP-2 ( ) shows the increases required to equalize class rates of return based on the pro forma summer coincident peak cost of service study. This schedule indicates that the industrial service class requires a 4.65% increase to reach parity with cost, assuming the total level of requested rate relief of $104.7 million, or 8.7%, is granted.

Q WHAT IS YOUR RECOMMENDATION WITH RESPECT TO A COST-BASED DISTRIBUTION OF ANY INCREASE AWARDED TO SCE&G IN THIS PROCEEDING?

A Any rate increase granted should be distributed to classes proportional to the quantities in Column 4 of Schedule 1 of Exhibit NP-2 ( ) or Column 6 of Schedule 4 of Exhibit NP-2 ( ). The large general class increase should be no more than 5.38%, and ideally should be no more than 4.65% assuming SCE&G receives its entire rate increase request. If SCE&G receives one-half of its rate request, these quantities should be reduced by one-half. For example, if SCE&G is granted a $52 million or 4.3% overall increase, the large general service class increase should be no more than 2.3%.

Rate Design

Q HAVE YOU REVIEWED THE MANNER IN WHICH SCE&G PROPOSES TO ADJUST ITS VARIOUS INDUSTRIAL RATE SCHEDULES?

A SCE&G proposes to place the majority of the increase in the demand component of the rate, which is appropriate. Increasing demand is consistent with cost of service. Of course, SCE&G's proposed revenue level for the large general service class is excessive and would overcharge these customers by more than $2.1 million as previously explained. The magnitude of SCE&G's proposed increase to industrial customers should be reduced to be more reflective of cost.

Return on Plant Not Used and Useful

Q HAVE YOU REVIEWED SCE&G'S REQUEST TO EARN A RETURN ON PLANT THAT IS NOT USED AND USEFUL IN PROVIDING ELECTRIC SERVICE TO SOUTH CAROLINA RATEPAYERS?

A Yes. Approximately $42.8 million of the $104.7 million (40%) requested increase is associated with the Company's request to be allowed to earn a full return on the Jasper combined cycle generating facility while under construction. The request is unusual for the following reasons:

(1) Combined cycle gas generation is a relatively low capital cost generation compared to coal or nuclear generation.

(2) The construction time is relatively short.

(3) Interest rates are at their lowest levels in the past 40 years.

(4) The economy is in an economic downturn and ratepayers should not be forced to finance SCE&G's construction on the promise of lower rates in the future.

(5) The Jasper facility is being sized larger than required to serve SCE&G's electric load. SCE&G is scheduled to sell 250 MW of firm capacity from 2004 through 2012.

Q WHY IS IT UNUSUAL FOR A UTILITY TO REQUEST THAT IT BE ALLOWED TO EARN A RETURN FOR GAS-FIRED GENERATION DURING CONSTRUCTION?

A Gas-fired generation is lower capital cost and higher fuel cost generation compared to coal-fired or nuclear generation. Gas-fired generation also is constructed on a shortened construction schedule compared to coal-fired or nuclear generation. Therefore, there is comparatively much less need for assistance in financing gas-fired construction. Utilities such as Duke and CP&L have constructed a significant amount of gas-fired generation without requesting a rate increase during construction or after completion and operation of the generating facilities.

Q ARE INTEREST RATES CURRENTLY AT HIGH LEVELS?

A The Federal Reserve has decreased interest rates at least ten times in the last two years. The discount rate is now at the lowest level it has been in the last 40 years. Therefore, SCE&G's current construction is not faced with abnormally high interest rates.

Q IS IT FAIR FOR THE COMMISSION TO FORCE RATEPAYERS TO PAY HIGHER RATES FOR A PLANT THAT IS NOT USED AND USEFUL IN PROVIDING ELECTRIC SERVICE?

A No. Ratepayers should not be forced to finance SCE&G's construction. Ratepayers may not be in the service territory to receive service from the facility. Some businesses may need the capital to finance necessary expenditures integral to their own survival.

Q IS SCE&G BUILDING THE JASPER FACILITY LARGER THAN CURRENTLY REQUIRED?

A Yes. SCE&G indicates that only about 254 MW of capacity is required by 2004 and 480 MW by 2006. Yet, ratepayers are being forced to prepay for 875 MW under SCE&G's request to increase rates in this proceeding. SCE&G has contracted to sell 250 MW of capacity from 2004 through 2012. It is clear that SCE&G is constructing more capacity than is currently required and asking the Commission to force ratepayers to pay for the capacity while it is not used and useful in providing electric service.

Q WHAT DO YOU RECOMMEND?

A I recommend that the Commission reject SCE&G's proposal to force ratepayers to provide a return to SCE&G on the Jasper generating facility prior to its being used and useful in providing electric service. Since the plant is larger than required, SCE&G has the opportunity to sell capacity from the facility to assist in its construction financing to the extent required.

Q DO YOU HAVE ANY OTHER CONCERNS REGARDING CHARGING HIGHER RATES TO RATEPAYERS FOR FACILITIES THAT ARE NOT USED AND USEFUL?

A Yes. SCE&G's request to recover costs associated with GridSouth is another concern. First, GridSouth is apparently "on-hold" and not yet abandoned. Second, the GridSouth costs are not used and useful in providing electric service. Third, the majority owners of GridSouth are Duke and CP&L. To my knowledge, neither Duke nor CP&L has requested any cost recovery for GridSouth expenditures. Fourth, GridSouth was undertaken to develop a more workable wholesale market. Accordingly, SCE&G's request to put its share of GridSouth costs in the rate base is more appropriately a wholesale ratemaking issue.

Q PLEASE COMMENT ON SCE&G'S REQUEST TO RECOVER COSTS ASSOCIATED WITH MAINTAINING CERTAIN FRANCHISE AREAS FROM CUSTOMERS.

A SCE&G proposes to collect from ratepayers payments associated with maintaining franchise rights in the cities of Charleston and Columbia, South Carolina. It is my understanding that the transfer of assets associated with transit systems is involved in the franchise negotiations. Although SCE&G claims that the costs associated with maintaining these franchise areas benefit all ratepayers, no conclusive quantitative evidence, such as a cost benefit analysis, has been presented. To the extent shareholders benefit from securing these franchises, shareholders should share in the costs. Certainly, SCE&G is a more valuable entity with the continuation of the Charleston and Columbia franchises. Only costs that are determined to be used and useful in the provision of electric service should be included in the revenue requirement in this proceeding.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes.

Qualifications of Nicholas Phillips, Jr.

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Nicholas Phillips, Jr. My business mailing address is P. O. Box 412000, 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and am a principal in the firm of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EMPLOYMENT EXPERIENCE.

A I graduated from Lawrence Institute of Technology in 1968 with a Bachelor of Science Degree in Electrical Engineering. I received a Master's of Business Administration Degree from Wayne State University in 1972. Since that time I have taken many Masters and Ph.D. level courses in the field of Economics at Wayne State University and the University of Missouri.

I was employed by The Detroit Edison Company in June of 1968 in its Professional Development Program. My initial assignments were in the engineering and operations divisions where my responsibilities included the overhead and underground design, construction, operation and specifications for transmission and distribution equipment; budgeting and cost control for operations and capital expenditures; equipment performance under field and laboratory conditions; and emergency service restoration. I also worked in various districts, planning system expansion and construction based on increased and changing loads.

Since 1973, I have been engaged in the preparation of studies involving revenue requirements based on the cost to serve electric, steam, water and other portions of utility operations.

Other responsibilities have included power plant studies; profitability of various segments of utility operations; administration and recovery of fuel and purchased power costs; sale of utility plant; rate investigations; depreciation accrual rates; economic investigations; the determination of rate base, operating income, rate of return; contract analysis; rate design and revenue requirements in general.

I have held various positions including Supervisor of Cost of Service, Supervisor of Economic studies and Depreciation, Assistant Director of Load Research, and was designated as Manager of various rate cases before the Michigan Public Service Commission and the Federal Energy Regulatory Commission. I was acting as Director of Revenue Requirements when I left Detroit Edison to accept a position at Drazen-Brubaker & Associates, Inc., in May of 1979.

The firm of Drazen-Brubaker & Associates, Inc. was incorporated in 1972 and has assumed the utility rate and economic consulting activities of Drazen Associates, Inc., active since 1937. In April 1995 the firm of Brubaker & Associates, was formed. It includes most of the former DBA principals and staff.

Our firm has prepared many studies involving original cost and annual depreciation accrual rates relating to electric, steam, gas and water properties, as well as cost of service studies in connection with rate cases and negotiation of contracts for substantial quantities of gas and electricity for industrial use. In these cases, it was necessary to analyze property records, depreciation accrual rates and reserves, rate base determinations, operating revenues, operating expenses, cost of capital and all other elements relating to cost of service.

In general, we are engaged in valuation and depreciation studies, rate work, feasibility, economic and cost of service studies and the design of rates for utility services. In addition to our main office in St. Louis, the firm also has branch offices in Denver, Colorado; Chicago, Illinois; Asheville, North Carolina; Kerrville, Texas; and Plano, Texas.

Q WHAT ADDITIONAL EDUCATIONAL, PROFESSIONAL EXPERIENCE AND AFFILIATIONS HAVE YOU HAD?

A I have completed various courses and attended many seminars concerned with rate design, load research, capital recovery, depreciation, and financial evaluation. I have served as an instructor of mathematics of finance at the Detroit College of Business located in Dearborn, Michigan. I have also lectured on rate and revenue requirement topics.

Q HAVE YOU PREVIOUSLY APPEARED BEFORE A REGULATORY COMMISSION?

A Yes. I have appeared before the New Jersey Board of Public Utilities, the Public Service Commissions of Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Montana, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Virginia, West Virginia, and Wisconsin, the Lansing Board of Water and Light, and the Council of the City of New Orleans in numerous proceedings concerning cost of service, rate base, unit costs, pro forma operating income, appropriate class rates of return, adjustments to the income statement, revenue requirements, rate design, integrated resource planning, power plant operations, fuel cost recovery, regulatory issues, rate-making issues, environmental compliance,

avoided costs, cogeneration, cost recovery, economic dispatch, rate of return, demand-side management, regulatory accounting and various other items.

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